

REMARKS

Pursuant to 37 C.F.R. § 1.111, Applicants respectfully requests reconsideration of the claim rejections set forth in the Office Action dated December 11, 2006.

Summary

Claims 1 – 6 are currently pending.

Claim Objections

The Examiner stated “[c]laim 1 recites the limitation ‘the two sides perpendicular...’ in lines 9 – 10. There is insufficient antecedent basis for this limitation in the claim” (Office action dated December 11, 2006; page 2). Applicant respectfully disagrees. Claim 1 was amended in a Preliminary Amendment deposited on February 18, 2004. In the Preliminary Amendment, the phrase “the two” was deleted from claim 1. Accordingly, Applicants respectfully request that the claim objections be withdrawn.

Claims Rejections

Claims 1 – 3 and 6 were rejected pursuant to 35 U.S.C. § 103(a) as being unpatentable over Sakai (WO 01/41496) in view of Azima (U.S. Patent No. 6,522,760) and Shimakawa (5,894,263). Claim 4 was rejected pursuant to 35 U.S.C. § 103(a) as being unpatentable over Sakai in view of Azima and Shimakawa and further in view of Sahyoun (U.S. Patent No. 6,460,651). Claim 5 was rejected pursuant to 35 U.S.C. § 103(a) as being unpatentable over Sakai in view of Azima and Shimakawa and further in view of Bertagni (U.S. Patent No. 5,693,917).

Claim 1 recites an electroacoustic transducer comprising, *inter alia*, a vibration-generating driving source that is supported on a back side of the diaphragm near one end of the diaphragm.

As noted by the Examiner, “Sakai fails to teach wherein the vibration-generating driving source is supported on the back side of the diaphragm near one end of the diaphragm” (Office action dated December 11, 2006; page 3; lines 6 – 8). The Examiner cites the teachings of Azima as disclosing a vibration-generating driving

source that is supported on a back side of the diaphragm near one end of the diaphragm. Applicants respectfully disagree with this interpretation.

Azima fails to disclose a vibration-generating driving source that is supported on a back side of the diaphragm near one end of the diaphragm. Azima is directed to transducer 31- 34 that are coupled to a panel 11 (abstract). Azima is directed to the placement of transducers 31 – 34. The Examiner cites the transducer 34 as the vibration-generating driving source. However, Azima fail to disclose the elements that make-up the transducer 34. In other words, Azima recites a transducer but fails to disclose the location of the elements located inside the transducer 34.

The cited references fail to disclose a vibration-generating driving source that is supported on a back side of the diaphragm near one end of the diaphragm. Therefore, claim 1 is allowable over the cited references.

Claim 1 is also allowable for additional reasons that are independent of those discussed above. Claim 1 recites, *inter alia*, the vibration-generating driving source is supported on a back side of the diaphragm near one end of the diaphragm. The Examiner stated that “[i]t would have been obvious to one of ordinary skill in the art at the time of the invention to combine the apparatus of Sakai as modified, with the apparatus of Azima to provide acoustically acceptable effective distribution and excitement of resonant mode vibration, resulting in improved sound quality” (Office action dated December 11, 2006; page 4). The Applicant maintains that the cited references fail to disclose or suggest a vibration-generating driving source is supported on a back side of the diaphragm near one end of the diaphragm. However, even under the Examiner’s interpretation there is no motivation or suggestion to combine the teachings by Sakai and Azima. Sakai teaches that “[t]he central shaft 11 is passed and inserted through the central hole of the magnetic circuit device to position the yoke 1, the permanent magnet 2, and the plate 3 on the same axis” (page 4, line 13 – 16). As shown in Figures 1B, 3B, and 4 – 12A, the central shaft 11 is centered between the ends of the vibrating member 9. The yoke 1 is evenly distributed between both sides of the central shaft 11. “With this arrangement, it is possible to design the yoke 1 to have

greater mass. In a case using the yoke 1 of the greater mass, the vibration actuator can cause the vibration of a greater level" (page 7, lines 23 – 26). In contrast to the Examiner's interpretation, shifting the yoke 1, the permanent magnet 2, and the plate 3 (which are on the same axis) to one side would decrease the mass of the yoke 1, which would decrease the level of vibration and sound quality. Also, one skilled in the art would understand that a yoke that is unequally supported (i.e. greater weight on one side of the central shaft 11) will produce an unstable vibration. The Applicant respectfully disagrees that there is any teaching or suggestion to combine the teachings of Sakai and Azima. In addition, the Examiner has failed to show that the cited references suggest the desirability of the claimed invention. Therefore, claim 1 is allowable over the cited references.

Claim 1 is also allowable for additional reasons that are independent of those discussed above. Claim 1 recites, *inter alia*, a vibration controlling portion for controlling a particular vibration mode having a large amplitude generated in the diaphragm is formed in the cushion member or the base.

The Examiner noted that "Sakai fails to teach... a vibration controlling portion for controlling a particular vibration mode having a large amplitude generated in the diaphragm is formed in the cushion member or the base" (Office action dated December 11, 2006; page 3). The Examiner cites the teachings of Shimakawa et al. as disclosing the recited limitation. Applicants respectfully disagree with the Examiner's interpretation.

Shimakawa et al. fail to teach a vibration controlling portion for controlling a particular vibration mode having a large amplitude generated in the diaphragm is formed in the cushion member or the base. Shimakawa et al. teach a contrary. The examiner cites the resilient bodies 21(a) – (e) as the vibration controlling portion. arrangement. Shimakawa et al. teach the resilient bodies 21(a) – (e) are disposed so that "the yoke 18 suffers less attenuation of the vibration" (col. 9; lines 29 – 31) and

prevent the yoke 3 from contacting the upper cylinder body 20a due to impact. Shimakawa et al. fail to disclose vibrations modes.

The teachings of Sakai and Shimakawa et al. fail to teach a vibration controlling portion for controlling a particular vibration mode having a large amplitude generated in the diaphragm is formed in the cushion member or the base. Therefore, claim 1 is allowable over the cited reference.

Claim 1 is also allowable over the cited references for additional reasons that are independent of those discussed above. Claim 1 is allowable because there is no motivation or suggestion to combine the teachings of the cited references. The Examiner cites the teachings of Sakai and Shimakawa et al., which are directed to axially symmetric arrangements. Any variation or modification of the symmetric arrangement would render the teachings unsatisfactory for their intended purpose [MPEP 2143.01(V)]. Accordingly, claim 1 is allowable over the cited references.

Dependent claims 2 – 6 depend from an allowable base claim, so are allowable for at least this reason. Further limitations of the cited references are allowable over the cited references. For example, the cited references fail to disclose the vibration controlling portion comprises holes formed in a portion of the cushion member, and an elastic force of the cushion member supporting the diaphragm is partly varied by the holes as recited in claim 4. Sahyoun teaches a contrary arrangement. Sahyoun teaches a hole made in a rigid outside frame. The outside frame is not a resilient body.

Also, the cited references fail to disclose the vibration controlling portion comprises a stepped portion formed in the portion of the base supporting the other side of the cushion member, and an elastic force of the cushion member supporting the diaphragm is partly varied by the stepped portion as recited in claim 5. Bertagni teaches a contrary arrangement. Bertagni teaches T-shaped member 78, which are not stepped as recited in claim 5.

Conclusion

For at least the reasons presented above, the Applicant respectfully submits that the pending claims are in condition for allowance.

The Examiner is respectfully requested to contact the undersigned in the event that a telephone interview would expedite consideration of the application.

Respectfully submitted,



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